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tion of the large brick residence which stands directly east of the main observatory building. The earthquake vibration bulged the north and south walls of this building and produced shear cracks in all walls, particularly around windows. Extensive repairs will be necessary to make it entirely safe. It should, however, be said that the construction of this house did not specially fit it to withstand earthquake vibration, and that the walls had been weakened by the shocks of 1903 and 1906. The walls of the other brick residences on the mountain were uninjured.

Notes on the time and intensity of the shock will be found elsewhere in this number.

R. G. AITKEN.

July, 1911.

NOTES FROM THE MOUNT WILSON SOLAR OBSERVATORY.

Construction work on Mount Wilson has been in active progress since April and will be continued until the opening of the rainy season. The Snow telescope house is being reconstructed to a considerable extent, with a view to rendering it essentially fire-proof. The canvas louvres on the outside of the building, as well as the canvas inside walls, are being replaced with sheet steel painted white, and a steel roof, with ventilators at intervals, will take the place of the old wooden roof. A concrete floor is being laid through the entire building, and a considerable number of changes are being made in the arrangement of the electric wiring and the controls on the switch-board.

Additional work during the summer will include a two-inch high-pressure water system to be used in case of fire, a large water reservoir, and the installation of storage tanks to contain a sufficient amount of distillate for the power plant throughout the winter months.

Work has also been started on the foundations for the 100-inch reflecting telescope. The site for this instrument is a ridge to the north of the 60-inch dome, the nature of the ground being well adapted for the ends in view. During the summer the grading upon this site will be completed and the small piers to carry the elevated tracks upon which will slide

the movable house which covers the instrument will be laid, in order to provide an opportunity for the settling of the ground during the coming winter.

The 75-foot spectrograph to be used in connection with the 150-foot tower telescope has just been completed in the observatory shops and will be installed during the coming month. In its present form this instrument can be used with a dispersive apparatus consisting of a single grating, two gratings side by side, a 60° liquid prism, or a prism of 6° angle, the last to be employed for certain kinds of work with the spectroheliograph. The entire base of the instrument can be raised and lowered so that it can be used at a focal length of either 75 or 30 feet.

Among other instruments building in the observatory machine-shop are a quartz spectrograph of two inches aperture, to be used in the primary focus of the 60-inch reflector; a low dispersion short-focus spectrograph, for work on nebulae; and a measuring-machine with a screw twenty inches in length, to be employed in measuring the solar spectra obtained with the 150-foot tower telescope.

Owing to the difficulty encountered by the French Plate Glass Company in constructing a 100-inch disk free from air-bubbles and striæ, it has seemed desirable to make an attempt to figure the first disk received from this company some two years ago. Accordingly, work was begun upon it late in the autumn and has now progressed to the point where the fine grinding of the concave surface can be commenced. At the present time it seems highly probable that this disk can be figured in a perfectly satisfactory way, and owing to the depths of the bubbles below the surface that none of them will be encountered in the course of parabolizing. The vital question of the effect of change of temperature upon the figure can of course be decided only after the work has progressed considerably farther.

Professor J. C. KAPTEYN and Mrs. KAPTEYN of Holland have arrived at Mount Wilson to spend the months of July, August and September.

Dr. ARNOLD KOHLSCHÜTTER of the Hamburg Observatory will be on Mount Wilson during the coming year, acting as research assistant.

Professor ALBERT SMITH of Purdue University will spend the months of July and August in Pasadena, acting as consulting engineer in connection with the design of the 100-inch reflecting telescope.

W. S. ADAMS.

July, 1911.

NOTE ON THE DISCOVERY OF COMET *b* 1911 (KIESS).

Comet *b* 1911 was discovered by the writer on a plate taken on the morning of July 6th with the Crocker photographic telescope. The comet was on the very edge of the plate and appeared as a distorted, nebulous object, which might easily have escaped detection but for the faint, tail-like streamer of light attached to it. This led at once to the suspicion that the object was a comet. Examination of the object on the following morning with the 12-inch telescope confirmed this view.

With the aid of the telescope a fine, sharp nucleus and a faint tail were visible. Subsequent photographs taken with the Crocker telescope by Mr. R. S. SHEPPARD, assistant in the Lick Observatory, show the comet to have a streamer tail nearly four degrees in length. The comet is of the seventh magnitude (estimated) and can easily be seen with an opera-glass. It is moving at a uniform rate in a southwesterly direction. At present its position is approximately R. A. 4^h 30^m, Dec. + 33° 5.

C. C. KIESS.

LICK OBSERVATORY, July 17, 1911.

PRELIMINARY ELEMENTS AND EPHEMERIS OF COMET *b* 1911 (KIESS).

The orbit is based on observations taken by KIESS at Lick Observatory on July 7th, 11th, and 15th.

T (Perihelion date) 1911, June 30.2827, Gr. M. T.

$$\left. \begin{array}{l} \Omega = 158^{\circ} 46' 29'' \\ \omega = 111 \quad 11 \quad 9 \\ i = 148 \quad 30 \quad 42 \end{array} \right\} \text{Ecliptic 1911.0}$$

$$q = 0.69858$$

EPHEMERIS.

1911 Gr. M. T.	True α	True δ
July 26.5	4 ^h 14 ^m 50 ^s	+ 30° 4' 2"
28.5	4 9 46	29 0 12
July 30.5	4 4 2	27 43 51